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*SHAF W02 97-412944/38 *JP 09186394-A
Distribution feedback type semiconductor laser appts used in optical communication - has optical absorption laser that feedbacks induced light emission, according to periodic optical absorption

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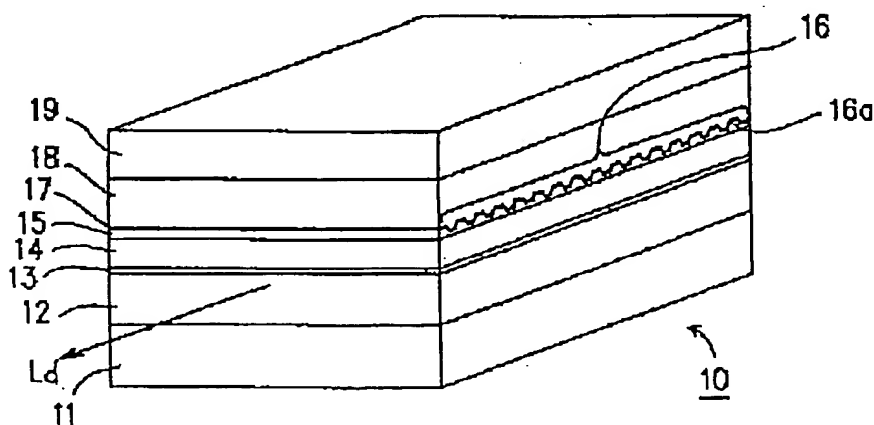
The appts has a first AlGaAs and second P-AlGaAs barrier layers (13,14) that generate induced emission light. A first N- type AlGaAs and second P-type AlGaAs clad layers (12,18) are arranged on lower and upper sides of the first and second clad layers, respectively. An optical absorption layer (17) is arranged between the second barrier and the second clad layers. An optical waveguide layer (15) is formed between the optical absorption layer and the second barrier layer. A diffraction grating (16) is formed at uneven wave structured surface of optical absorption layer that touches optical waveguide absorption layer, along propagation direction of induced emission light at constant cycle period.

The thickness 'df1' at top and bottom parts of optical absorption layer, is different from the thickness 'df2' of the slant-face part between top and bottom parts. The linear uneven wave structure at the surface of optical absorption layer, has sequentially arranged top and bottom parts at each half of the repeat period along propagation direction of induced emission light. The induced emission light is feedback according to periodic optical absorption of light by optical absorption layer.

USE/ADVANTAGE - In wavelength multiplex communication, optical information processing, optical measurement, laser beam printer. Reduces threshold value of oscillation. Simplifies mfg process of laser. Offers laser appts with sufficient yield in single shaft mode. (12pp Dwg.No.1/10)

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